

# Installation and Maintenance Instruction Manual

## Device Type Manager (DTM) GOLD SERIES



**Table of contents:**

1	Introduction .....	3
2	Installation.....	3
2.1	Before DTM Installation.....	3
2.2	DTM Installation .....	3
2.3	After DTM Installation.....	4
3	DTM.....	4
3.1	Device data (Static).....	4
3.2	Device data .....	5
3.3	Device input: Temperature .....	5
3.4	Process value scale .....	6
3.5	Device output: Output.....	6
3.6	Device output: Linearization.....	7
3.7	Measured value.....	7
3.8	Device: Human interface .....	7
3.9	Transmitter construction.....	8
3.10	HART .....	8

# 1 Introduction

This instruction manual is a guide for installing and using the intelligent pressure and level transmitter GOLD SERIES using HART. This DTM is developed to make configuration changes of the GOLD SERIES transmitters easy. This DTM can be used with almost every FDT-container.

## 2 Installation

### 2.1 Before DTM Installation

The DTM software is used along with a HART modem and a FDT frame application (Eg. PACTware). Before using the DTMs on your Computer or Laptop the following needs to be done:

1. Install the HART Modem drivers
2. Install FDT Frame Application – Eg. PACTware

These installation files and manuals will be provided by the manufacturer of the HART modem or can be downloaded from the internet.

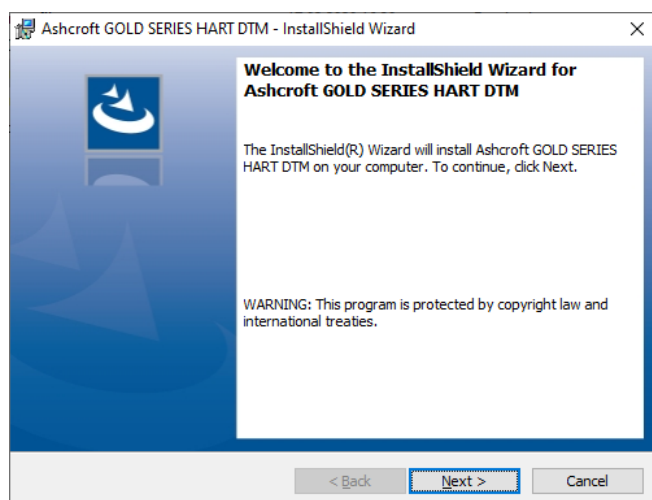
### 2.2 DTM Installation

To install the GOLD SERIES DTM on your system, you have to download the installation file. The latest revision can be downloaded from the Ashcroft Instruments website: [www.ashcroft.eu](http://www.ashcroft.eu), under section Products >Transducers and Transmitters > *PG55 or CG55*> ZIP Download.

To start the installation, always extract **Ashcroft GOLD SERIES HART DTM zip file**.

Select **Ashcroft GOLD SERIES HART DTM.exe** \* (You must have administrator rights, do not use the .msi file)

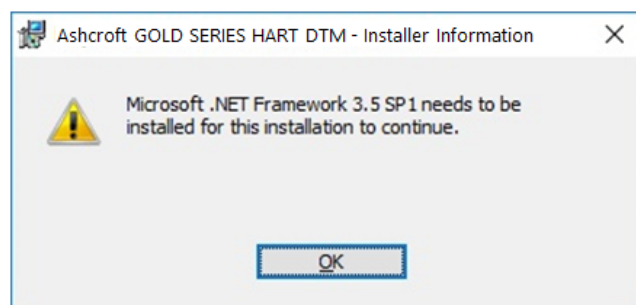
\*Minimal software requirements: Windows 7 (32 or 64 bit) or higher, for older versions please contact Ashcroft Instruments.



### Microsoft .net Framework 3.5

The GOLD SERIES DTM requires .NET Framework 3.5 from Microsoft. If the framework is already installed the setup will continue.

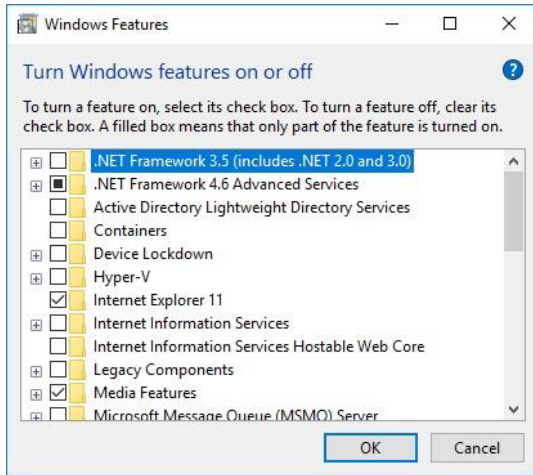
When the framework is not installed the following message appears:



Windows 7 users can download the .NET Framework package from the following location:

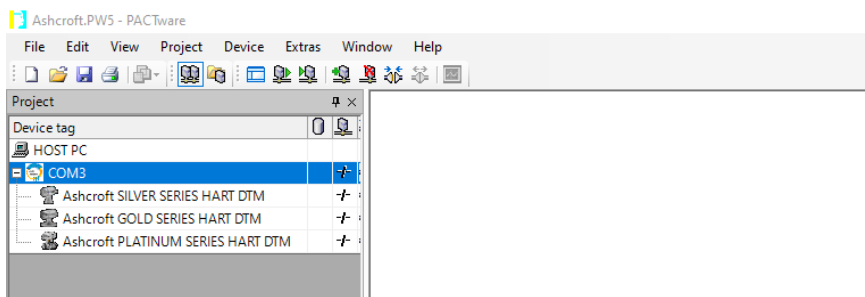
<https://www.microsoft.com/en-US/download/details.aspx?id=21>

Windows 10 and 8 users can download the .NET Framework package by selecting the start menu and type “windows features” in the search box. The following window appears and the .NET Framework 3.5 can be enabled.



## 2.3 After DTM Installation

After Installation of the DTMs, the DTMs have to be added onto the FDT Frame Application(PACTware), under the port the HART Modem is connected to.



Select the DTM and connect to start the communication with the device. Double clicking the connected DTM will open the Online-parametrization window (Offline, if device is not connected).

## 3 DTM

The following pages describe the DTM configuration.

### 3.1 Device data (Static)

This menu shows data about the transmitter. This data is read-only and cannot be changed. The data contains information about: The manufacturer, type of transmitter, serial number, revision and others.

Ashcroft GOLD SERIES HART DTM # Online Parametrierung

Ashcroft GOLD SERIES HART DTM  
GOLD SERIES PG55 and CG55  
Version:1.0.2


ASHCROFT®

Online Parameterize

- Device Identification
  - Device Data (Static)
  - Device Data
- Device Input
  - Temperature
  - Process Value Scale
- Device Output
  - Output
  - Linearization
- Measured Values
- Device
  - Human Interface
  - Transmitter Construction
  - HART

Device Data (Static)

Manufacturer	Ashcroft Instruments GmbH	Software Revision	10
Device Type	GOLD SERIES PG55 and CG55	Hardware Revision	1
HART Device ID	5382172	Physical Signalling	Bell 202 current
Distributor	Ashcroft Instruments GmbH	Final Assembly Number	0
Universal Revision	7	Sensor Type	Range 3
Device Revision	1	PV Snr s/n	5002028



## 3.2 Device data

This menu contains data like TAG, Descriptor, message and date. This data can be changed.

Ashcroft GOLD SERIES HART DTM # Online Parametrierung

Ashcroft GOLD SERIES HART DTM  
GOLD SERIES PG55 and CG55  
Version:1.0.2

ASHCROFT®

Online Parameterize

- Device Identification
  - Device Data (Static)
  - Device Data
  - Device Data
- Device Input
  - Temperature
  - Process Value Scale
- Device Output
  - Output
  - Linearization
- Measured Values
- Device
  - Human Interface
  - Transmitter Construction
  - HART

Device Data

Tag	ASHCROFT
Descriptor	16 CHARACTERS
Message	32 CHARACTERS
Date	05.02.2020

## 3.3 Device input: Temperature

In this menu it is possible to change the unit of measured temperatures. It also shows the measured sensor and ambient temperatures. These values are refreshed every 10 seconds.

Ashcroft GOLD SERIES HART DTM # Online Parametrierung

Ashcroft GOLD SERIES HART DTM  
GOLD SERIES PG55 and CG55  
Version:1.0.2

ASHCROFT®

Online Parameterize

- Device Identification
  - Device Data (Static)
  - Device Data
  - Device Data
- Device Input
  - Temperature
  - Process Value Scale
- Device Output
  - Output
  - Linearization
- Measured Values
- Device
  - Human Interface
  - Transmitter Construction
  - HART

Temperature

Temperature Unit	°C
Sensor Temperature	23,4 °C
Housing Temperature	24,7 °C

### 3.4 Process value scale

This menu can be used to change the measuring range without test pressure. The maximum and minimum values of measuring range and the sensor limits are shown. The actual range is adjustable with the Lower Range Value (**PV LRV**) and Upper Range Value (**PV URV**). The Sensor value is refreshed every 10 seconds. The engineering unit can be changed with **PV Snsr Unit**.

With the buttons **Adjust Zero (4 mA)** and **Adjust Span (20 mA)**, the Zero and Span can be adjusted Without test pressure. After pressing one of these buttons, follow the displayed instructions. With the buttons **Set Mounting Position Correction** and **Reset Mounting Position Correction** the mounting position can be corrected or reset to factory setting, follow the displayed instructions.

The screenshot shows the 'Process Value Scale' configuration page in the Ashcroft GOLD SERIES HART DTM software. The interface includes a navigation tree on the left with 'Process Value Scale' selected. The main area contains the following fields and buttons:

- Upper Sensor Limit:** 12000 mbar
- Lower Sensor Limit:** -999,9999 mbar
- Maximum Span:** 12000 mbar
- Minimum Span:** 800 mbar
- PV Snsr Unit:** mbar (dropdown menu)
- PV LRV:** 0 mbar
- PV URV:** 10000 mbar
- Sensor Value:** 200,3425 mbar

Buttons available on the right side of the page include: 'Adjust Zero (4 mA)', 'Adjust Span (20 mA)', 'Set Mounting Position Correction', and 'Reset Mounting Position Correction'.

### 3.5 Device output: Output

In this menu the damping of the output and the mA output (4-20 mA or 20-4 mA) can be configured. If necessary the output can be trimmed with the button **D/A Trim**.

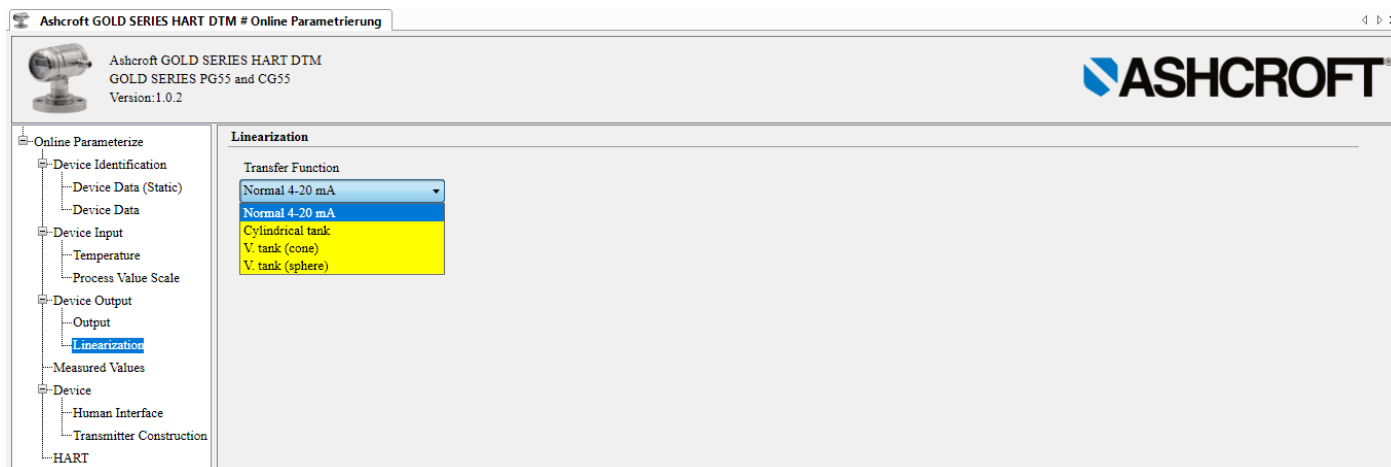
The screenshot shows the 'Output' configuration page in the Ashcroft GOLD SERIES HART DTM software. The interface includes a navigation tree on the left with 'Output' selected. The main area contains the following fields and buttons:

- PV Damp:** 0,0 seconds
- Reverse Output:** 4-20 mA (dropdown menu)

Buttons available on the page include: 'Loop Test' and 'D/A Trim'.

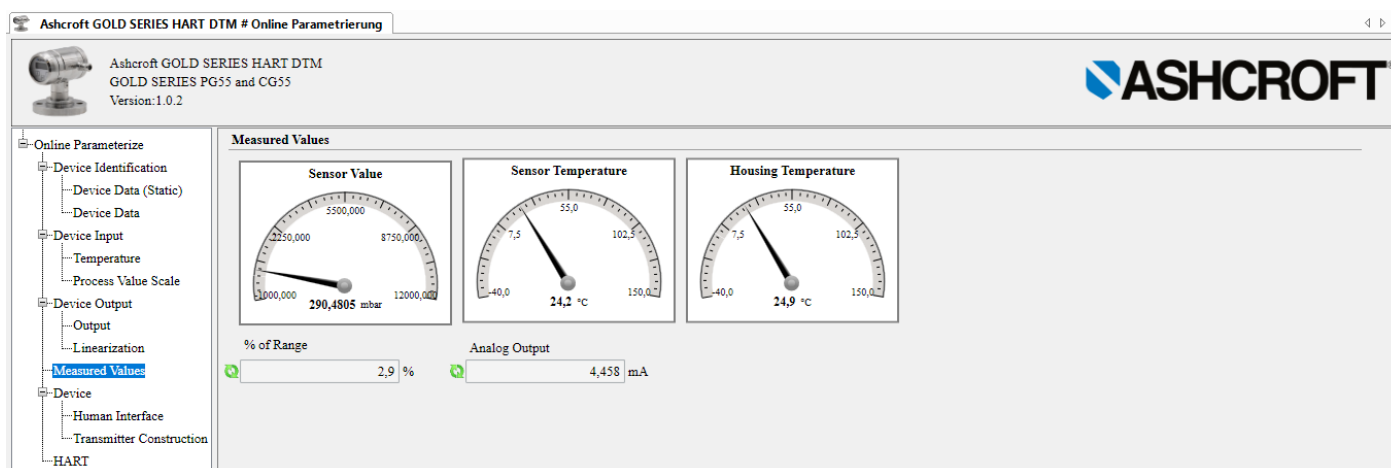
### 3.6 Device output: Linearization

In this menu it is possible to configure a linearization. Four options are available: **Normal 4-20 mA**, **Cylindrical tank**, **V. Tank (cone)** and **V. Tank (Sphere)**. For each option specific parameters will be asked to fill in. Also the density of medium can be configured.



### 3.7 Measured value

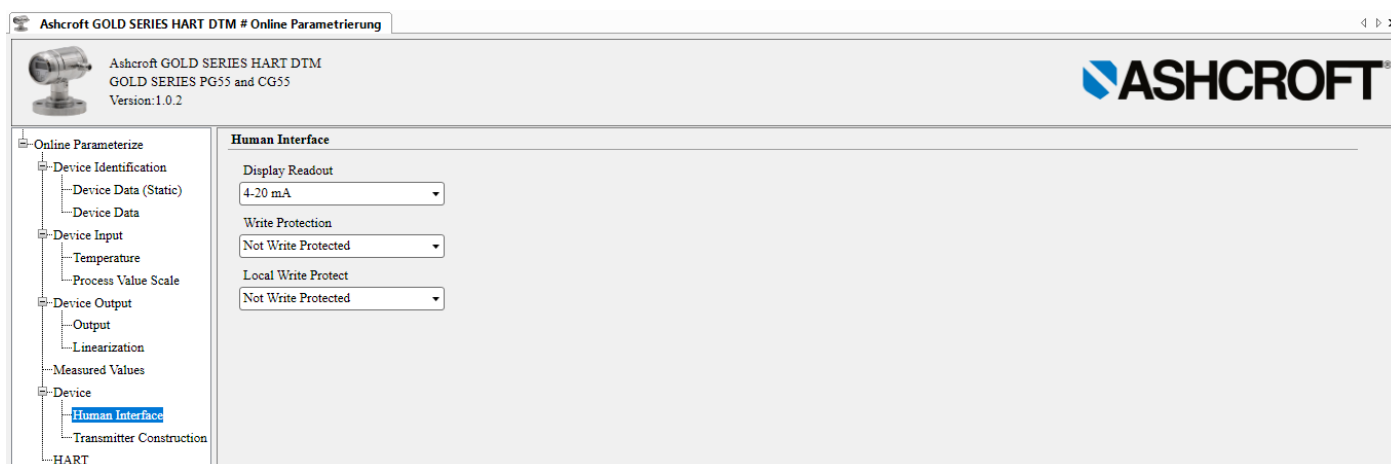
In this menu the actual readings are displayed. The actual readings are refreshed every 10 seconds.



### 3.8 Device: Human interface

In this menu the output on the display of the transmitter can be configured. The following options are possible for the display readout: 4-20 mA, Units, Percent, Process temperature, Hectoliter and Cubic liter.

Hectoliter and Cubic liter are only available when linearization is enabled. The transmitter can be protected against configuration of parameters using HART communication (**Write protection**) or local configuration (**Local write protect**). Both protections can be configured separately.



### 3.9 Transmitter construction

This menu shows additional construction information of the transmitter.

The screenshot shows the software interface for the Ashcroft GOLD SERIES HART DTM. The title bar reads "Ashcroft GOLD SERIES HART DTM # Online Parametrierung". The top left features a product image and text: "Ashcroft GOLD SERIES HART DTM", "GOLD SERIES PG55 and CG55", and "Version:1.0.2". The top right displays the "ASHCROFT®" logo. On the left is a tree view under "Online Parameterize" with the following structure:
 

- Device Identification
  - Device Data (Static)
  - Device Data
- Device Input
  - Temperature
  - Process Value Scale
- Device Output
  - Output
  - Linearization
- Measured Values
- Device
  - Human Interface
  - Transmitter Construction**
- HART

 The main content area is titled "Transmitter Construction" and contains two dropdown menus:
 

- Diaphragm Material: A dropdown menu with a question mark icon and a downward arrow.
- O Ring Material: A dropdown menu with the text "Not used" and a downward arrow.

### 3.10 HART

This menu contains HART related data.

The screenshot shows the software interface for the Ashcroft GOLD SERIES HART DTM. The title bar reads "Ashcroft GOLD SERIES HART DTM # Online Parametrierung". The top left features a product image and text: "Ashcroft GOLD SERIES HART DTM", "GOLD SERIES PG55 and CG55", and "Version:1.0.2". The top right displays the "ASHCROFT®" logo. On the left is a tree view under "Online Parameterize" with the following structure:
 

- Device Identification
  - Device Data (Static)
  - Device Data
- Device Input
  - Temperature
  - Process Value Scale
- Device Output
  - Output
  - Linearization
- Measured Values
- Device
  - Human Interface
  - Transmitter Construction
  - HART**
- HART

 The main content area is titled "HART" and contains three input fields:
 

- Num Request Preambles: An input field containing the value "5".
- Universal Revision: An input field containing the value "7".
- Device Revision: An input field containing the value "1".